

A CHECKLIST OF THE IRISH FIGITIDAE EXCLUDING CHARIPINAE & EUCOILINAE (HYMENOPTERA)

J. P. O'CONNOR¹, N. D. M. FERGUSSON² and R. NASH³

¹National Museum of Ireland, Kildare Street, Dublin 2

²The Natural History Museum, Cromwell Road, London SW7 5BD

³Ulster Museum, Botanic Gardens, Belfast BT9 5AB

Abstract. The Irish species of Figitidae excluding Charipinae and Eucoilinae (Hymenoptera) are reviewed, and a checklist provided. A total of 17 species is now known from Ireland, 10 of which are recorded for the first time in this paper.

INTRODUCTION

The Figitidae is a family of parasitoid wasps within the superfamily Cynipoidea, the latter including the phytophagous gall-inducing wasps in the family Cynipidae. The biology of the Figitidae is poorly understood, but apart from the Charipinae all seem to be primary, solitary endoparasitoids. The main host preferences of the three (Irish) subfamilies considered in this paper are as follows: Figitinae are internal parasitoids of Diptera in carrion, dung or plant substrates; Anacharitinae are parasitoids of Hemerobiidae (Neuroptera); Aspicerinae are parasitoids mostly of Syrphidae (Diptera) preying on aphids (Hemiptera). From the information available, it seems likely that many parasitic cynipoids have more than one generation per year (Fergusson, 1986). *Callaspidia defonscolombei* Dahlbom has two generations (Rotheray, 1979) and *Figites* can have three. James (1928) has suggested that the preponderance of females in reared samples of *Figites anthomyiarum* Bouché might indicate that a certain amount of parthenogenesis occurs.

Little work has been done on the Irish fauna. However, as with so many other Irish insect groups, A. H. Haliday made a valuable contribution, being the author of three genera (Haliday *in* Curtis, 1829; Haliday *in* Walker, 1835). Two of these are still valid (*Aegilips* and *Melanips*) while the third (*Onychia*) is preoccupied. Haliday's latin descriptions of *Aegilips* and *Melanips* are very detailed but no Irish species are cited. Subsequently, Fergusson (1986) and O'Connor and Speight (1987) added five and two species respectively to the Irish list.

THE CHECKLIST

A total of 17 species is now on the Irish list, 10 of which are reported for the first time in this paper. One of these, *Aspicera scutellata* (Villers), has not yet been found in Britain where twenty four species have been recorded. The Irish fauna is therefore well known, with over 66% of that found in Britain. By contrast, the percentages for the braconids (44%) and chalcidoids (30%) are much lower (O'Connor *et al.*, 1999, 2000). The listed material was identified using Fergusson (1986). The nomenclature, host data and British distributions follow that work. Unless otherwise stated, voucher specimens of the new species have been deposited in the National Museum of Ireland, Dublin. The following abbreviations are used in the text: AWS – A. W. Stelfox; BMNH – British Museum (Natural History); EOM – E. O'Mahony; JPOC – J. P. O'Connor; MAOC – M. A. O'Connor; RAP – R. A. Phillips. * = species new to Ireland.

FIGITINAE

**Figites anthomyiarum* Bouché, 1834

CARLOW: St Mullins (S7238), 15.viii.1994, collected on the bank of the River Barrow, JPOC; DUBLIN: Phoenix Park, 27.vi.1943, AWS Collection (BMNH); The Island, 14.viii.1945, AWS; LAOIS: Abbeyleix, 27.viii.1925, RAP.

New to Ireland. *Figites anthomyiarum* is a common species in Britain. The hosts are dipterous larvae of *Anthomyia*, *Calliphora*, *Hydrotaea*, *Hylemya*, *Lucilia*, *Musca*, *Phorbia* and *Sarcophaga*, especially when in carrion.

**Figites consobrinus* Giraud, 1860

LOUTH: near Dundalk, 30.vi.1942, AWS (BMNH); WEXFORD: Carnsore Point (T1203), 1.ix.1980, JPOC.

New to Ireland. *Figites consobrinus* is widespread but not common in Britain. The species is a parasitoid of Diptera associated with carrion and dung.

**Figites ictus* Fergusson, 1986

KILKENNY: no locality, 8.ix.1925, RAP; WICKLOW: The Murrough, south of Newcastle, 5.viii.1942, AWS (BMNH).

New to Ireland. *Figites ictus* is known from six English counties. Its host is unknown.

Louchidia clavicornis Thomson, 1862

Recorded from Dublin, Leitrim, Sligo and Wicklow by Fergusson (1986). In Britain the species has only been reported from three counties in England. Its host is unknown.

Louchidia maculipennis (Dahlbom, 1842)

Recorded from Dublin and Wicklow by Fergusson (1986). The species has been reported from eight British counties. Its host is unknown.

Melanips microcerus (Kieffer, 1903)

Recorded from Dublin and Wicklow by Fergusson (1986). The species has been reported from four British counties. Its host is unknown.

**Melanips opacns* (Hartig, 1840)

CAVAN: Virginia Woods (N5987), swept in mixed woodland, 21.v.1989, JPOC & MAOC; DUBLIN: Castleknock (O0837), Malaise trap in suburban garden, 7–21.vi.1984, JPOC & MAOC; Phoenix Park, 23.vii.1942, AWS (BMNH); KILDARE: Rye Water & Royal Canal, 16.v.1943, AWS Collection (BMNH); MEATH: Kilmessan (N8857), swept from vegetation along disused railway track, 27.v.1990, JPOC & MAOC; WATERFORD: near Passage East (S6811), swept from vegetation along hillside path, 12.vi.1991, JPOC; WEXFORD: Slieve Coiltia (S7221), 14.vi.1990, JPOC.

New to Ireland. *Melanips opacns* is very common in Britain. The hosts are hoverfly larvae belonging to *Episyrphus balteatus* (Degeer), *Syrphus ribesii* (L.), *S. torvus* Osten Sacken and *S. vitripennis* Meigen (Diptera: Syrphidae).

**Melanips sylvanus* Giraud, 1860

WEXFORD: Fethard (S7905), swept from sand-dunes, 10.vi.1990, JPOC.

New to Ireland. *Melanips sylvanus* has only been reported from Fife and Surrey in Britain. Its host is unknown.

**Sarothrus tibialis* (Zetterstedt, 1838)

TIPPERARY: Ballinacourty, Aherlow, 26.ix.1943, AWS Collection (BMNH).

New to Ireland. *Sarothrus tibialis* is common in Britain. Its host is unknown.

ANACHARITINAE

**Aegilips atricornis* Fergusson, 1985

DUBLIN: Castleknock (O0837), Malaise trap in suburban garden, August 1984, JPOC.

New to Ireland. *Aegilips atricornis* is common in Britain. Its hosts are lacewing larvae belonging to *Wesmaelius betulinus* (Ström) and *W. subnebulosus* (Stephens) (Neuroptera: Hemerobiidae).

**Aegilips uitidula* (Dalman, 1823)

LEITRIM: Glencar (G7643), swept from vegetation beside the waterfall, 25.viii.1992, JPOC; WATERFORD: Ballin Lough (S4403), swept from lakeside vegetation, 18.vi.1990, JPOC & MAOC.

New to Ireland. *Aegilips uitidula* is common in Britain. Its hosts are lacewing larvae belonging to *Hemerobius* sp. and *W. subnebulosus* (Neuroptera: Hemerobiidae).

**Anacharis eucharoides* (Dalman, 1818)

ANTRIM: Glenarm, 26.vii.1931, AWS; CARLOW: Cloughristick (S7069), swept from mixed vegetation beside River Barrow, 19.vi.1982, JPOC & MAOC; CLARE: Burren (M2711), swept from vegetation in a marsh, 4.vi.1992, JPOC & MAOC; Kilshanny (R1093), swept from a hedgerow, 31.vi.1992, JPOC; near Formoye (M1606), Burren, swept from vegetation on limestone pavement, 29.v.1992, JPOC; DOWN: Conlig, 4.viii.1931, AWS; DUBLIN: St Anne's, Clontarf, August 1924, EOM; KILDARE: Louisa Bridge (N9936), swept from vegetation in a marsh, 2.viii.1982, JPOC & 30.viii.1991, JPOC & MAOC; Newbridge Fen (N7616), swept in fen, 8.ix.1991, JPOC & MAOC; LEITRIM: Glencar (G7643), swept from vegetation beside the waterfall, 25.viii.1992, JPOC; WATERFORD: near Passage East (S6811), swept from vegetation along hillside path, 3.vii.1991, JPOC & MAOC; Belle Lake (S6605), swept from lakeside vegetation, 11.vi.1991, JPOC; WESTMEATH: Pakenham (N4470), swept in mixed woodland, 23.vii.1989, JPOC; WEXFORD: Curracloe (T1127), swept in marsh beside sand-dunes, 13.vi.1991, JPOC & MAOC.

New to Ireland. *Anacharis eucharoides* is very common in Britain. Its hosts are lacewing larvae belonging to *Hemerobius micans* Olivier, *Wesmaelius betulinus* and *W. subnebulosus* (Neuroptera: Hemerobiidae).

**Anacharis immunitis* Walker, 1835

DUBLIN: St Anne's, Clontarf, emerged 22.v.1939 from Diptera in the nest of a mistle thrush collected on 23.iv.1939, EOM; WATERFORD: near Passage East (S6811), swept from vegetation along hillside path, 3.vii.1991, JPOC & MAOC; WICKLOW: Athdown, 8.ix.1938, AWS Collection (BMNH).

New to Ireland. *Anacharis immunitis* is very common in Britain. Its known hosts are lacewing larvae belonging to *Hemerobius stigma* Olivier, *W. betulinus* and *W. subnebulosus* (Neuroptera: Hemerobiidae). O'Mahony's Clontarf record is therefore of interest.

Xyalaspis armata (Giraud, 1860)

KILDARE: Kilkea Park, September 1937, AWS (BMNH).

Recorded from Dublin and Sligo by Fergusson (1986). The species has been reported from three counties in Britain. Its host is unknown.

Xyalaspis petiolata Kieffer, 1901

DUBLIN: Harold's Cross, 29.viii.1933, AWS; WESTMEATH: Tudenham (N4147), swept from lakeside vegetation, 9.vii.1997, JPOC.

Recorded from Kildare by O'Connor and Speight (1987). The species is common in Britain. Its hosts are lacewing larvae belong to *Hemerobius* and *W. subnebulosus* (Neuroptera: Hemerobiidae). The adults are often found on tree bark.

ASPICERINAE

Aspicera scutellata (Villers, 1789)

Recorded from Meath by Fergusson (1986). The species has not been found in Britain. Its host is unknown.

Callaspidia defonscolombi Dahlbom, 1842

KILDARE: Louisa Bridge (N9936), swept from vegetation in a marsh, 2.viii.1982, JPOC; TIPPERARY: Aherlow, 13.ix.1943, AWS.

Recorded from Westmeath by O'Connor and Speight (1987). *Callaspidia defonscolombi* is common in Britain. The species is a solitary parasitoid of hoverfly larvae (Diptera: Syrphidae). The adults are bivoltine, being most numerous in early August and late September.

ACKNOWLEDGEMENT

The senior author wishes to thank M. A. O'Connor for her help with field work.

REFERENCES

- Fergusson, N. D. M. 1986. Charipidae, Ibaliidae and Figitidae. Hymenoptera: Cynipoidea. *Handbooks for the Identification of British Insects* 8(1c): 1–55.
- Haliday, A. H. 1829 in Curtis, J. *A guide to an arrangement of British insects; being a catalogue of all the named species hitherto discovered in Great Britain and Ireland*. Westley & Davies, London.
- Haliday, A. H. 1835 in Walker, F. Observations on the British Cynipites. *Entomological Magazine* 3: 159–170.
- James, H. C. 1928. On the life-histories and economic status of certain Cynipid parasites of Dipterous larvae, with descriptions of some new larval forms. *Annals of Applied Biology* 15: 287–316.
- O'Connor, J. P., Nash, R. & Achterberg, C. van 1999. A catalogue of the Irish Braconidae (Hymenoptera: Ichneumonoidea). *Occasional Publication of the Irish Biogeographical Society* 4: 1–123.
- O'Connor, J. P., Nash, R. & Bouček, Z. 2000. A catalogue of the Irish Chalcidoidea (Hymenoptera). *Occasional Publication of the Irish Biogeographical Society* 6: 1–135.
- O'Connor, J. P. & Speight, M. C. D. 1987 *Macrosiplum albifrons*, *Dictenidia bimaculata*, *Callaspidia defonscolombi* and *Xyalaspis petiolata*: insects new to Ireland. *Irish Naturalists' Journal* 22: 199–201.
- Rotheray, G. E. 1979. The biology and host searching behaviour of a Cynipoid parasite of aphidophagous syrphid larvae. *Ecological Entomology* 4: 75–82.